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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,588	07/20/2006	Satoru Kaimura	292500US40PCT	7373
22850 7590 09/17/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER WALBERG, TERESA J	
			ART UNIT	PAPER NUMBER
			3744	
			NOTIFICATION DATE	DELIVERY MODE
			09/17/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/586,588	<b>Applicant(s)</b> KAIMURA ET AL.	
	<b>Examiner</b> Teresa J. Walberg	<b>Art Unit</b> 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/25/08, 10/12/06, 7/20/06</u> . | 6) <input type="checkbox"/> Other: ____.  |

### DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 and 8-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al (JP 2000-74586).

Tanaka et al discloses a flat tube making plate-like body (Fig. 2) in the form of a single metal plate including two flat wall forming portions having the same width and interconnected by a connecting portion (Fig. 2), side wall forming portions projecting from the flat wall forming portions toward the same direction (Fig. 2), the side wall forming portions being butted against each other when the metal plate is folded into a hairpin turn at the connecting portion (Fig. 2), a reinforcing wall forming portion integrally formed on each of the flat wall forming portions so as to project in the same direction as the side wall forming portion (Fig. 2), the reinforcing wall forming portion of one of the flat wall forming portions being butted against that of the other flat wall forming portion as a pair when the metal plate is folded into a hairpin form at the connecting portion (Figs. 1 and 2), one of the pair of reinforcing wall forming portions (1 in Fig. 3) to be butted against each other being smaller in thickness than the other reinforcing wall forming portion (2 in Fig. 3), thin and thick reinforcing wall forming portions being integrally provided on each of the flat walls (Fig. 3), thick and thin wall forming

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portions being arranged alternately on the walls (Fig. 3), the end faces of the wall having a ridge and groove (Fig. 2), the body being folded into a tube and brazed to form reinforcing walls (see English language abstract).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (JP 2000-74586).

Tanaka et al discloses a flat tube making plate-like body having the claimed structure with the exception of the thickness of the walls. However, it would have been obvious to one of ordinary skill in the art to make the walls any desired thickness based on the intended use of the device.

5. Claims 17-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (JP 2000-74586) in view of Sugawara et al (2002/0153131).

Tanaka et al discloses a flat tube making plate-like body having the claimed structure with the exception of the structure and method of making the heat exchanger in which the tubes are used including providing a pair of headers,

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and fins, brazing the parts together, using the heat exchanger in a refrigeration cycle device.

Sugawara et al discloses using flat tubes in heat exchangers including headers and fins, brazing the parts together, and using the heat exchanger in a refrigeration cycle device.

It would have been obvious to one of ordinary skill in the art in view of Sugawara et al use the tubes of Tanaka et al in heat exchangers including headers and fins, brazing the parts together, and using the heat exchanger in a refrigeration cycle device, the motivation being to enable use of such tubes in the conventional manner.

Note that the heat exchanger of Tanaka et al in view of Sugawara et al would inherently be capable of use in a device for a "supercritical refrigeration cycle" and as a vehicle air conditioner.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wilmot, Hirano et al, Liu, Ichiyanagi, and Minami et al are cited to show tube forming structure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teresa J. Walberg/  
Primary Examiner, Art Unit 3744

/TW/